LG 12kV Metalclad Switchgear

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LG Industrial Systems

KEMA TÜV CERT

ISO 9001

LG 12kV METALCLAD SWITCHGEAR

HI-POWER V12

Being Created by Diversified Industrial Electricity

Stabilized Power Supply and Maximization of Energy Efficiency-
Where there is industry and electricity, LG Industrial Systems always stands by your side

Technology

TÜV CERT ISO 9001

LG HI-POWER V12 switchgear using a Vacuum Circuit Breaker (VCB) is metalclad type in compliance with IEC/BS standards, and is designed for general power distribution systems with rated voltage up to 12kV.

COMPACT AND SIMPLE DESIGN

- Standard module for each circuit.
- Human engineering for measuring and indication.

SAFETY DESIGN

- Compartments are divided by grounded metal partitions.
- Quick-make earthing switches are used for earthing and withstand of making capacity.
- Type tested in accordance with IEC 298.
- Removable circuit breaker with mechanical interlocks to prevent mal-operation.
- Pressure relief device is available on request.

MAINTENANCE AND INSPECTION

- VCB is maintenance free.
- Minimized maintenance and simplified inspection work are realized, allowing easy and fast cable connection.
- Tightly sealed enclosure protects the equipment from ingress of contamination and vermin.

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LG HI-POWER V12 is designed with VCB based on function and stability and is the free standing switchgear.

STANDARD RATINGS

DESCRIPTION		STANDARD RATINGS		
TYPE		HI-POWER V12		
RATED VOLTAGE (kV)		12		
RATED INSULATION LEVEL (kV)	POWER FREQUENCY/1MIN	28 (36)*		
	IMPULSE/1.2×50 μS	75 (95)*		
RATED FREQUENCY (Hz)		50/60 Hz		
RATED NORMAL CURRENT FOR BUSBAR (A)		630, 1250, 2000, 3150		
RATED SHORT-TIME WITHSTAND CURRENT (kA/1sec or 3sec)		25, 31.5, 40		
CIRCUIT BREAKER	RATED CURRENT(A)	630, 1250, 2000, 3150		
	RATED INTERRUPTING CURRENT(kA)	25	31.5	40
	RATED MAKING CURRENT(kA)	63	80	100
APPLIED STANDARD		IEC 298, BS 162		
DEGREE OF PROTECTION	Enclosure	IP 4×		
	Barrier	IP 2×		

Note : ( )*- applicable by option

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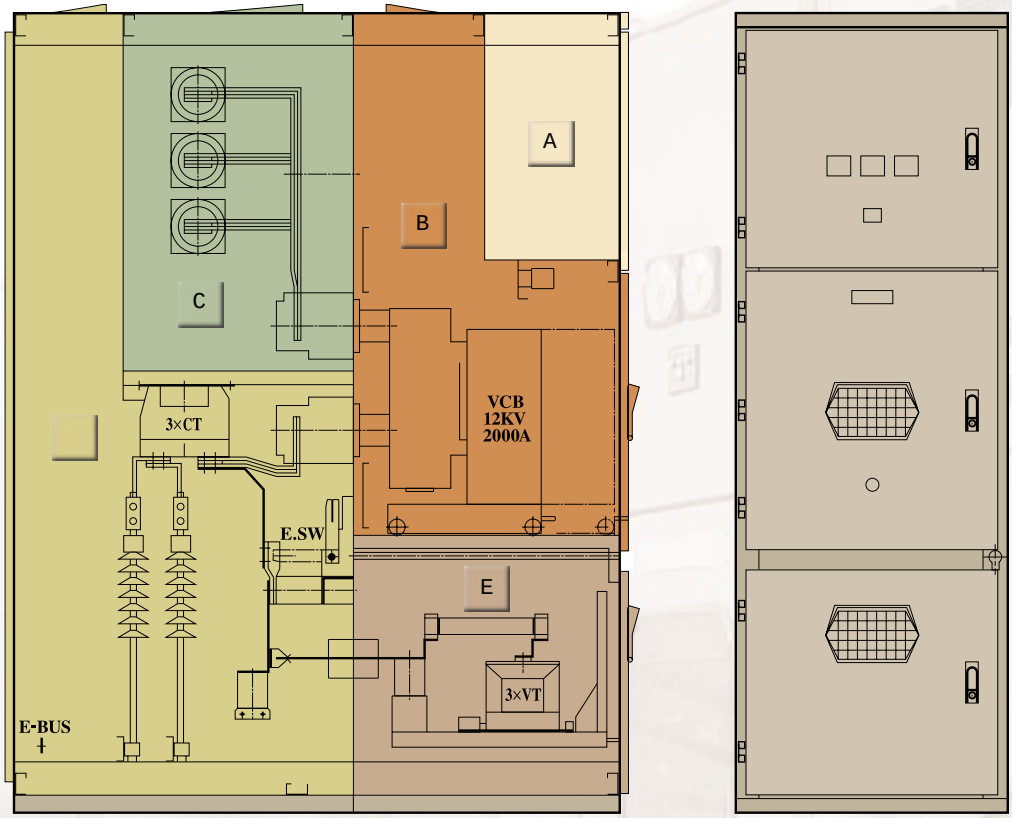

LOW VOLTAGE COMPARTMENT

B CB COMPARTMENT

C BUSBAR COMPARTMENT

CABLE COMPARTMENT

E VT COMPARTMENT

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LOW VOLTAGE COMPARTMENT

Low voltage compartments are fitted at the top of the switchgear.
The low voltage compartment is itself fully enclosed and separated from the high voltage compartment. It is closed off at the front by a separated door.
The low voltage compartment is adequately dimensioned to accomodate all the necessary protection relays, instruments, control switches etc. and also control and protection system field units, installed either in the compartment or in the corresponding door.

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GIMAC & GIPAM

GIMAC
(LG Integrated Metering And Control Equipment)

- Integrating the metering function, control switch, conversion switch, and lamp of low voltage compartment on GIMAC.
  (A multiple metering & controlling equipment applied by μ-processor)
- Options : Data communciation,Transducer function.
- Special Feature
  - Simplification of the equipments
  - Various display function
  - Wide application

GIPAM
(LG Integrated protection And Metering Equipment)

- Integrating the other panel meter, protection relay, control switch, conversion switch, and lamp of low voltage compartment on GIPAM.
- Options : Tranducer function, Sequence of event.
- Special Feature
  - Simplification of the equipments
  - Various display function
  - Various protection function & Easy event analysis
  - Data communication function
  - High reliability with self-diagnosis function

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CIRCUIT BREAKER COMPARTMENT

The draw-out type VCB installed in the switchboard has the following three (3) positions within the compartment.

- SERVICE POSITION
  The main isolation contacts and auxiliary circuits are connected.
- TEST POSITION
  The main isolating contacts are disconnected and auxiliary circuits are connected.
- DISCONNECTED POSITION
  The main isolating contacts and auxiliary circuits are disconnected.

NOTE : Padlock facilities are available in service and test position.

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SAFETY SHUTTER

Busbar and circuit spout orifices are fitted with automatically operated safety steel shutters. For testing and inspection, each shutter can be individually operated by hand, and locked with a latch mechanism which is automatically restored, when the circuit breaker is inserted to the service position. Padlock facility in closed position is availible.

SAFETY INTERLOCK

The following mechanical interlocks are provided to achieve safety.

- The circuit breaker cannot be drawn-out or inserted to/from the service position while it is closed.
- The circuit breaker cannot be closed while it is being drawn-out or inserted.

EARTHING

- The circuit breaker is automatically earthed through an earthing shoe connected to the earth bus directly.
- The earthing shoe ensures the earthing between the test and service positions of the breaker.
- Earthing switch is available as option items
  - Main bus earthing switch
  - Cable earthing switch

NOTE : The earthing switch have a mechanical interlock facilities (Padlock or Keylock) So that when the VCB is service position, earthing switch can not be closed.

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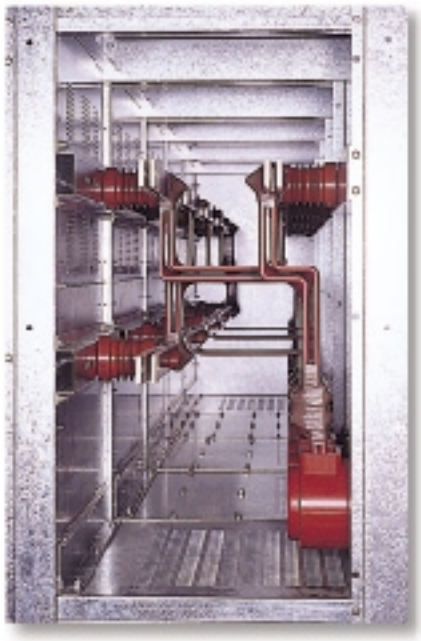
BUSBAR COMPARTMENT & CABLE COMPARTMENT



BUSBAR COMPARTMENT

- Busbars are hard-drawn high conductivity copper, supported by epoxy resin insulator or wall bushing.
- Bus bars are designed for sufficient mechanical strength to short time current.
- Wall bushing is available as option items.

CABLE COMPARTMENT

- Sufficient spaces are provided for cable termination and entry. Current transformer, cabling and supporting brackets are composed at cabling compartment.

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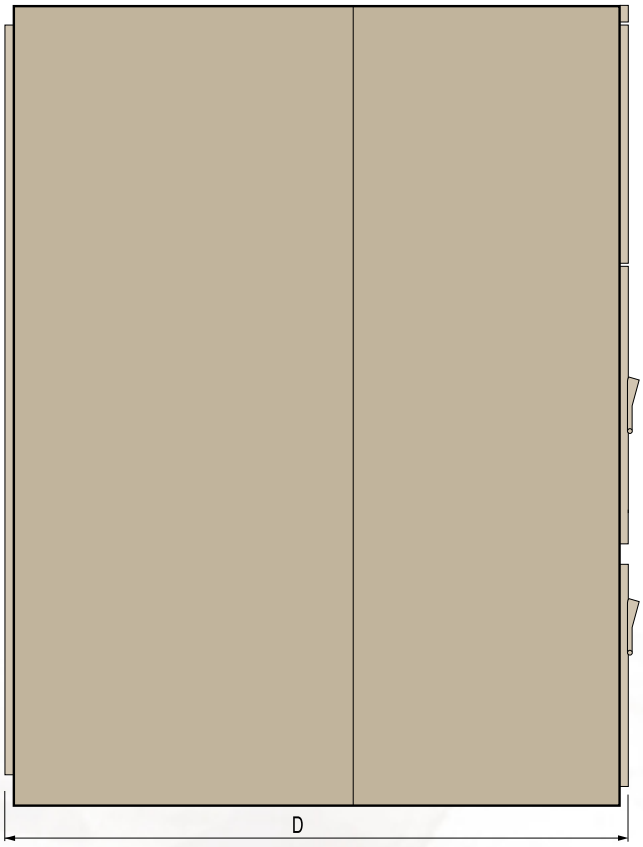
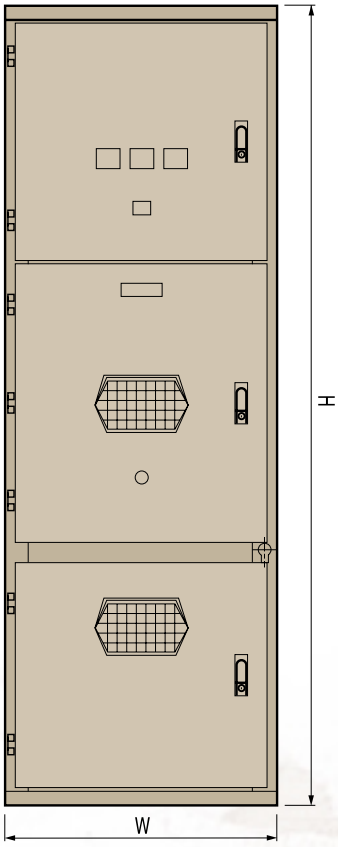
DIMENSION

SIDE VIEW



FRONT VIEW



RATED VOLTAGE	RATED SHORT-TIME WITHSTAND CURRENT	RATED CURRENT	DIMENSIONS (mm)		
			WIDTH (W)	DEPTH (D)	HEIGHT (H)
12kV	25kA	630A	800	1800	2350
		1250A	800	1800	2350
		2000A	800	1800	2350
	31.5kA	1250A	800	1800	2350
		2000A	800	1800	2350
		3150A	1000	1800	2350
	40kA	1250A	900	1800	2350
		2000A	900	1800	2350
		3150A	1000	1800	2350

Note : These dimensions may be changed, so please contact us when you order.
HEIGHT (2350mm) is including 50mm base channel.

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LG constantly endeavors to improve our products, so that information in this catalog is subject to change without notice.

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